

REMARKS

The applicant appreciates the Examiner's thorough examination of the application and requests reexamination and reconsideration of the application in view of the following remarks.

The Examiner rejects claims 1, 3-6, 9-14, 24, 26, and 27 under 35 U.S.C. §103(a) as allegedly being unpatentable over *Lewis* in view of *Akram* and further in view of *Kohama*.

Lewis teaches a circuit board with a flashing LED held in place on a shirt with a sticker over the circuit board. The sticker is larger than the circuit board and has a hole for the LED. The result is a sticker (with an outwardly facing name or logo), a circuit board, and then the shirt. The notion is to be able to remove the sticker and the LED without damaging the shirt. See *Lewis*, Col. 2, lines 29-44. Note how *Lewis* distinguishes his device from more permanently affixed LEDs at Col. 1, line 59 – Col. 2, line 18.

Akram discloses circuit board 24, Fig. 8 with a stack of chips thereon all connected to circuit board 24 via flex circuits. *Akram* teaches nothing regarding wearable electronics.

Kohama teaches a non-woven fabric substrate with an embedded coil and chip. Typically, two non-woven fabric layers are hot-pressed over the coil and the chip. See Col. 12, lines 22-56. *Kohama*, like *Akram*, teaches nothing regarding wearable electronics. Instead, *Kohama*'s disclosure is directed to a contactless IC card.

The Examiner states "While *Lewis* does show a flexible substrate being secured with an adhesive, it remains the Examiner's opinion that substituting a more permanent type of securing such as ultrasonic welding would allow for greater durability in the finished product".

This substitution, however, would render *Lewis*' device unsatisfactory for its intended purpose. See MPEP 2143.01 (V and VI). *Lewis* specifically teaches that a permanently affixed LED or one more securely attached other than by a sticker would damage the shirt and hence

such a design is not desirable: “The present invention meets these needs and offers other advantages with a display sticker with an integral flasher and power source adapted to be adhesively affixed to *but readily removed* from an article of clothing or other fabric article... The adhesive has a tacky surface enabling the sticker to be readily affixed to fabric *and yet readily removed therefrom, i.e., without substantial force and without damage to the fabric such as by removing portions thereof or leaving adhesive residue thereon.*” *Lewis*, Col. 2, lines 29-44.

The applicant’s claimed system may sound simple but the recitation of a fabric with a flexible circuit substrate ultrasonically welded thereto is not anything suggested by the prior art of record. *Lewis* teaches away from the applicant’s claimed structure since *Lewis* focuses on a removable sticker holding the LED in place. Neither *Akram*’s stack of chips nor *Kohama*’s contactless IC card are meant to be placed on a shirt.

The applicant’s claim may sound simple but only the applicant delineates how to make a lower profile electrically active wearable textile article using a method that is much more robust and quite different from *Lewis*’ sticker. By choosing the correct substrate material which can be both imprinted with conductive traces and which can be secured to conventional fabrics, the applicant’s invention departs significantly from *Lewis*’ sticker.

Akram and *Kohama* failed to suggest to those skilled in the art that *Lewis*’ sticker could be replaced with a flex circuit ultrasonically welded about its periphery to a wearable fabric article. And, *Lewis* itself explicitly teaches that any such more permanently bonded chip is undesirable. The applicant’s claimed system is a flex circuit bonded to the fabric article so no sticker is required. Eliminating *Lewis*’ sticker is not suggested by *Lewis* or any fair reading of *Akram* or *Kohama*.

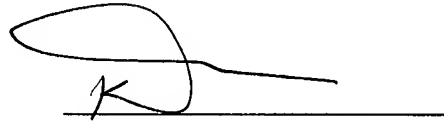
Accordingly, the Examiner's §103(a) rejection is, respectively, traversed.

CONCLUSION

Each of the Examiner's rejections has been addressed or traversed. It is respectfully submitted that the application is in condition for allowance. Early and favorable action is respectfully requested.

If for any reason this Response is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned or his associates, collect in Waltham, Massachusetts at (781) 890-5678.

Respectfully submitted,



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KT/ok